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<input type="checkbox"/>	L29	L28 and neutralized	4
<input type="checkbox"/>	L28	L27 and heat	6
<input type="checkbox"/>	L27	L24 and (acid)adj(hydrolyzed)	7
<input type="checkbox"/>	L26	L24 and (acid)adj(hydrolized)	0
<input type="checkbox"/>	L25	L24 and (molecular)adj(weight)adj(55,000)	6
<input type="checkbox"/>	L24	L23 and fraction	1738
<input type="checkbox"/>	L23	L22 and IgG	2431
<input type="checkbox"/>	L22	L21 and immunoglobulin	2967
<input type="checkbox"/>	L21	530/387.1,389.4;424/130.1.ccls.	4417
<input type="checkbox"/>	L20	(strohbehn)adj(ronald)adj(e)	15
<input type="checkbox"/>	L19	(yoder)adj(ralph)adj(d)	5
<input type="checkbox"/>	L18	L17 and neutralized	13
<input type="checkbox"/>	L17	L16 and heat	30
<input type="checkbox"/>	L16	L13 and (acid)adj(treated)	39
<input type="checkbox"/>	L15	L13 and (acid)adj(hydrol?)	0
<input type="checkbox"/>	L14	L13 and (acid)adj(hydroly?)	0
<input type="checkbox"/>	L13	L12 and (IgG)adj(fraction)	3199
<input type="checkbox"/>	L12	immunoglobulin	71395
<input type="checkbox"/>	L11	L10 and heated	4
<input type="checkbox"/>	L10	(IgG)same (acid)adj(hydrolysis)	33
<input type="checkbox"/>	L9	L2 and (acid)adj(hydrolysis)	0
<input type="checkbox"/>	L8	L5 and neutralized	1
<input type="checkbox"/>	L7	L5 and (55000)	0
<input type="checkbox"/>	L6	L5 and (55000)same(molecular)adj(weight)	0
<input type="checkbox"/>	L5	L4 and (acid)adj(treated)	4
<input type="checkbox"/>	L4	L2 and (acid)	110
<input type="checkbox"/>	L3	L2 and (acid)adj(hydrolyzed)	0
<input type="checkbox"/>	L2	(treatment)same(IgG)adj(fraction)	120
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NEWS	34	Feb 26	CAS Registry Number crossover limit increased from 10,000 to 300,000 in multiple databases

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L1 951047 IMMUNOGLOBULIN

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=> s l2 and acid hydrolyzed
L3 0 L2 AND ACID HYDROLYZED

=> s l1 and acid hydrolyzed
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L7 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
2006:224396 Document No. 144:383565 The immunomodulatory effects of
 3-monochloro-1,2-propanediol on murine splenocyte and peritoneal
 macrophage function in vitro. Byun, Jung A.; Ryu, Mi Hyun; Lee, Jong Kwon

(Division of Immunotoxicology, KFDA, National Institute of Toxicological Research, Seoul, 122-704, S. Korea). Toxicology in Vitro, 20(3), 272-278 (English) 2006. CODEN: TIVIEQ. ISSN: 0887-2333. Publisher: Elsevier Ltd..

- AB 3-Monochloro-1,2-propanediol (MCPD) is a well-known byproduct of acid-hydrolyzed soy sauce during its manufacturing process. MCPD has been reported genotoxic in vitro, and reproductive toxicity and carcinogenicity in rats. To evaluate the immunomodulatory effect of MCPD on murine splenocyte and macrophage in vitro, we investigated splenocyte blastogenesis by Con A, anti-CD3, and lipopolysaccharide (LPS), the production of cytokines from splenocyte, and the activity of mouse peritoneal macrophages. There was a significant decrease in lymphocyte blastogenesis to Con A or anti-CD3 at subtoxic dose of MCPD. A significant decrease in splenocyte blastogenesis to LPS was also observed. The production level of interferon (IFN)- γ on splenocyte culture with Con A was significantly reduced at the higher concentration than 1.0 mM of MCPD. The levels of interleukin (IL)-4 and IL-10 were also decreased at high concns. of MCPD. There was a significant decrease in production of nitric oxide (NO) by peritoneal macrophages treated with MCPD. MCPD also inhibits tumor necrosis factor (TNF)- α production of stimulated macrophages. These results indicate that MCPD might be able to reduce the functionality of lymphocytes and peritoneal macrophages in vitro.

L7 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

2002:595056 Document No. 137:139367 Antimicrobial protein derived from bovine IgG. Yoder, Ralph D.; Strohhahn, Ronald E. (The Lauridsen Group Incorporated, USA). PCT Int. Appl. WO 2002061136 A2 20020808, 15 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US1403 20020115. PRIORITY: US 2001-772603 20010130; US 2001-941965 20010827.

- AB A new protein derived from acid hydrolyzed IgG concentrate which has a mol. weight of about 55,000, and is activated by heat within the defined narrow temperature range provides resulting product that has a protective mechanism for bacterial and viral invasion of living cells.

L7 ANSWER 3 OF 12 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

2002106263 EMBASE Linoleic acid-stimulated vascular adhesion molecule-1 expression in endothelial cells depends on nuclear factor- κ B activation. Dichtl W.; Ares M.P.S.; Jonson A.N.; Jovinge S.; Pachinger O.; Giachelli C.M.; Hamsten A.; Eriksson P.; Nilsson J.. Dr. W. Dichtl, Department of Internal Medicine, Division of Cardiology, Leopold-Franzens-Univ. Innsbruck, Anichstrasse 35, A-6020 Innsbruck, Austria. Metabolism: Clinical and Experimental Vol. 51, No. 3, pp. 327-333 2002.

Refs: 41.

ISSN: 0026-0495. CODEN: METAAJ

Pub. Country: United States. Language: English. Summary Language: English. Entered STN: 20020404. Last Updated on STN: 20020404

- AB Endothelial activation is an important step in atherogenesis. In addition to established cardiovascular risk factors, such as hypercholesterolemia, hypertension, diabetes mellitus, and homocysteinemia, high plasma levels of triglyceride-rich lipoproteins may be an important cause of endothelial activation as well. Free fatty acids hydrolyzed from core triglycerides of these particles can exert both pro- and anti-inflammatory effects on the vascular wall. ω -3 fatty acids, such as eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), have been shown to inhibit cytokine-induced endothelial activation. In contrast, we and others have previously shown that the ω -6 fatty

acid linoleate activates transcription factor nuclear factor- κ B (NF- κ B) in endothelial cells. In this study, we show that linoleic acid stimulates vascular adhesion molecule-1 (VCAM-1) protein and mRNA expression in cultured human endothelial cells, as assessed by immunofluorescence and Northern blotting. Release of sheddable soluble VCAM-1 from cultured human endothelial cells was also increased by the addition of linoleic acid, as determined by enzyme-linked immunosorbent assay (ELISA). By use of cultured rat aortic endothelial cells transfected with an I κ B super-repressor (Δ N2 cells), we provide evidence that NF- κ B signalling is required in the linoleic acid-induced VCAM-1 expression in endothelial cells, whereas other transcription factors appear to be involved in the increased endothelial plasminogen activator inhibitor-1 (PAI-1) production in response to linoleic acid. These findings suggest that diets rich in linoleic acid may be proinflammatory and thus atherogenic by activating vascular endothelial cells. Copyright .COPYRGT. 2002 by W.B. Saunders Company.

L7 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

1997:226790 Document No. 126:211015 A specimen dilution indicator system for use in clinical diagnostic assays. Childerstone, Michael Steven (Centocor U.K. Limited, UK; Childerstone, Michael, Steven). PCT Int. Appl. WO 9705485 A1 19970213, 25 pp. DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-GB1903 19960802. PRIORITY: GB 1995-15855 19950802.

AB A serol. assay of an albumin-containing specimen for a predetd. antibody, which assay comprises: (i) contacting the specimen with an assay reactant which recognizes the antibody in the presence of a dilution buffer comprising: (a) 5',5''-dibromo-O-cresolsulfonephthalein or a water-soluble salt thereof, (b) at least one blocking agent which is capable of suppressing non-specific binding in the assay and in whose presence a discernible change in the light absorption of component (a) can take place when the dilution buffer is contacted with albumin; and (c) a buffer which is capable of maintaining a pH at which the assay is able to be effected and the light absorption of component (a) is able to be changed; (ii) determining whether the light absorption of component (a) of the dilution buffer has changed; and (iii) determining the presence of the antibody in the specimen. The blocking agent is selected from globulin, gelatin and enzyme- or acid-hydrolyzed casein. Immobilized Herpes simplex virus type 2 glycoprotein was used for detection of herpes simplex virus type 2-specific antibodies in serum sample by the method of the invention. Similarly, Toxoplasma gondii-specific antibodies were determined by the disclosed method using immobilized Toxoplasma gondii lysate.

L7 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

1996:200960 Document No. 124:325143 Synthesis and biological evaluation of immunoconjugates of adriamycin and a human IgM linked by poly[N5-(2-hydroxyethyl)-L-glutamine]. Hoes, C. J. T.; Ankone, M.; Grooten, J.; Feijen, J.; van der Struik, E.; van Doornmalen, A.; Pham, D.; de Man, A.; van Etteken, A.; et al. (Department of Chemical Technology, University of Twente. P.O. Box 217, AE Enschede, 7500, Neth.). Journal of Controlled Release, 38(2,3), 245-66 (English) 1996. CODEN: JCREEC. ISSN: 0168-3659. Publisher: Elsevier.

AB The synthesis and purification of radiolabeled immunoconjugates, composed of a human IgM monoclonal antibody (IgM 16.88) directed against an intracellular tumor-associated antigen, the drug carrier poly[N5-(2-hydroxyethyl)-L-glutamine] (PHEG) and the cytostatic drug adriamycin (ADR) are described. The immunoconjugates were constructed to allow selective release of ADR in the putatively acidic environment of the tumor through a novel acid-labile maleamic acid linker. The conjugate of PHEG and the acid-labile ADR derivative effectively released ADR in cytotoxic amounts at a pH of 6.0 as judged from incubation in buffer and from inhibition of the

growth of HT-29 colon tumor cells in vitro. Immunoconjugates were prepared by coupling of PHEG-ADR having a hydrolytically stable amide bond with ¹³¹I-labeled antibody through thioether bond formation involving a single thiol group at the C-terminus of the polymer chain and maleimido groups introduced onto the antibody. The immunoreactivity of IgM-PHEG-ADR conjugate was almost fully preserved. Tumor uptake and biodistribution of ¹²⁵I-labeled PHEG-ADR and of ¹³¹I-labeled IgM-PHEG-ADR, which was co-administered with ³H-labeled IgM 16.88, in nude mice carrying MRI-H-207 human ovarian tumor xenografts were studied. ¹²⁵I bound to PHEG-ADR was cleared relatively slowly from the circulation and significant tumor uptake was maintained during the period studied. The drug immunoconjugate was cleared more rapidly from the circulation with a concomitant decrease in tumor uptake as compared with unmodified IgM. The biodistribution data indicate that targeting of ADR with IgM 16.88 in this tumor model is not feasible.

- L7 ANSWER 6 OF 12 MEDLINE on STN DUPLICATE 1
 94055062. PubMed ID: 8236806. Effect of bovine serum albumin on passive transfer of immunoglobulin G1 to newborn calves. Besser T E; Osborn D. (Department of Veterinary Microbiology and Pathology, Washington State University, Pullman 99164-7040.) Veterinary immunology and immunopathology, (1993 Aug) Vol. 37, No. 3-4, pp. 321-7. Journal code: 8002006. ISSN: 0165-2427. Pub. country: Netherlands. Language: English.
- AB The molecular mechanism in the intestine of newborn calves that results in transfer of intact colostral immunoglobulin from the lumen to the circulation also is capable of transferring a variety of non-immunoglobulin macromolecules. If the capacity of this mechanism is limited, transfer of a large amount of non-immunoglobulin protein may interfere with transfer of immunoglobulin. In this experiment, efficiency of IgG1 transfer in newborn calves was reduced from 59 to 36% by the addition of bovine serum albumin (37 mg ml⁻¹) to colostral whey, while the addition of a similar mass of amino acids in the form of acid hydrolyzed casein (37 mg ml⁻¹) did not detectably alter IgG1 transfer. Reduced IgG1 absorption efficiency in calves fed colostrum with added bovine serum albumin is consistent with a limited capacity for the macromolecular transport mechanism in the intestine of newborn calves.
- L7 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
 1992:546604 Document No. 117:146604 Detection of Aspergillus and Penicillium extracellular polysaccharides (EPS) by ELISA: using antibodies raised against acid hydrolyzed EPS. Kamphuis, Henri J.; De Ruiter, Gerhard A.; Veeneman, Gerrit H.; Van Boom, Jacques H.; Rombouts, Frank M.; Notermans, Serve H. W. (Dep. Food Sci., Wageningen Agric. Univ., Wageningen, 6703 HD, Neth.). Antonie van Leeuwenhoek, 61(4), 323-32 (English) 1992. CODEN: ALJMAO. ISSN: 0003-6072.
- AB Species of the fungal genera Aspergillus and Penicillium produce immunol. active extracellular polysaccharides (EPS) in which galactofuranose residues are immunodominant. The antigenic determinant of the EPS of A. fumigatus, A. niger and P. digitatum could be removed by acid hydrolysis. Due to the hydrolysis of the EPS the immunol. reaction between IgG anti-native EPS and hydrolyzed EPS disappeared. Antibodies raised in rabbits against the acid hydrolyzed EPS revealed new antigenic determinants that were exposed as a result of the acid hydrolysis. Immunol. inhibitory expts. showed that the antibodies were no longer directed to galactofuranose residues. Enzyme Linked Immunosorbent Assay, carried out with antibodies raised against the acid hydrolyzed EPS showed that the antibodies against the acid hydrolyzed EPS were more species specific in comparison with the antibodies against the native EPS.
- L7 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN
 1990:175271 Document No. 112:175271 Ion-capture assays and devices. Hiltibrand, Robert G.; Jou, Yi Her; Kline, Steven J.; Schultz, Steven George; Stroupe, Stephen Denham (Abbott Laboratories, USA). Eur. Pat.

Appl. EP 326100 A2 19890802, 20 pp. DESIGNATED STATES: R: BE, CH, DE, ES, FR, GB, IT, LI, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1989-101263 19890125. PRIORITY: US 1988-150278 19880129.

AB This invention presents novel separation and assay procedures which allow both the indicator and the capture reagents to be in solution to avoid problems of slowed immunoreaction kinetics. The separation procedure involves an analyte-specific soluble capture reagent that is conjugated to a charged substance, and an insol. solid-phase material that is oppositely charged. A fluid sample suspected of containing the analyte is mixed with the capture reagent in solution to form a charged capture reagent/analyte complex. When binding is complete, the solution is contacted to the oppositely charged solid-phase material to attract, attach, and sep. the capture reagent/analyte complex from the fluid sample. With the appropriate indicator reagent, i.e., a second analyte-specific binding substance which is conjugated to a label capable of producing a detectable signal, both sandwich and competitive assays can be performed. The assay reaction complex can be separated from the solid by contact with the oppositely charged solid-phase material, and the presence or amount of analyte is monitored by detecting the label of the indicator reagent. Sandwich and competitive immunoassay kits are also disclosed. A sandwich immunoassay for human chorionic gonadotropin (hCG) used as capture reagent a highly neg. charged albumin derivative conjugated to anti-hCG antibodies (rabbit serum albumin was extensively succinylated and coupled to p-azobenzenesulfonate and then conjugated to thiol-derivatized anti-hCG antibodies or their Fab' fragments), an indicator reagent containing alkaline phosphatase-goat anti-hCG antibody conjugate, Gafquat 755N (polymeric quaternary ammonium compound)-coated solid phase, and a solution of 4-methylumbelliferyl phosphate as enzyme substrate.

L7 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

1987:116042 Document No. 106:116042 Application of solid-phase antibodies to radioimmunoassay. Evaluation of two polymeric microparticles, Dynospheres and nylon activated by carbonyldiimidazole or tresyl chloride. McConway, M. G.; Chapman, R. S. (Dep. Pathol. Biochem., R. Infirm., Glasgow, G4 0SF, UK). Journal of Immunological Methods, 95(2), 259-66 (English) 1986. CODEN: JIMMBG. ISSN: 0022-1759.

AB Two types of polymeric microparticle, Dynospheres and repptd. acid -hydrolyzed nylon 6/6, and 2 methods of activating these particles with either tresyl chloride or carbonyldiimidazole (CDI) prior to covalent linkage of antibodies were investigated with a view towards their resp. adoption for the preparation of general solid-phase reagents for immunoassay applications. Activation of each particle and coupling of antibodies was rapid irresp. of the activator. CDI proved to be the activator of choice since it was cheap, less hazardous, more efficient and less pH dependent than tresyl chloride. Both types of microparticle remain buoyant during the RIA incubation periods and form stable pellets after centrifugation. In second antibody applications immobilization of the first antibody occurs with a short incubation period of 30 min. Nylon microparticles have a higher antibody-coupling capacity and the particles of choice in both first and second applications. However, the nylon microparticles possess marginally higher nonspecific binding characteristics.

L7 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

1986:458539 Document No. 105:58539 The presence of plasma proteins facilitates the uptake of 125I-thrombin by the rabbit thoracic aorta endothelium in vitro. Hatton, Mark W. C.; Moar, Sue L. (Health Sci. Cent., McMaster Univ., Hamilton, ON, L8N 3Z5, Can.). Thrombosis Research, 43(1), 73-86 (English) 1986. CODEN: THBRAA. ISSN: 0049-3848.

AB Various purified proteins, protein derivs., and 2 polysaccharides were added individually to a physiol. medium to effect uptake of 125I-labeled thrombin (I) by the rabbit aorta endothelium. Over a wide range of concentration

(0.004-40 mg/mL), the presence of either purified rabbit or bovine albumin during I uptake encouraged an increase (70-110%) in 125I-labeled I binding

by the endothelium and subendothelium compared to uptake by aorta segments in the absence of added protein. Pretreatment of aorta segments with albumin before incubation with ¹²⁵I-labeled I in the absence of albumin did not encourage I uptake to the same extent as having ¹²⁵I-labeled I and albumin together. Purified human transferrin, rabbit IgG, chicken ovalbumin, or denatured bovine casein could replace albumin to produce a similar enhancement of I uptake. Replacing active concns. of albumin by either reduced-carboxymethylated albumin, defatted albumin, plasmin-treated albumin, or thermolysin-treated albumin also caused an increase (50-130%) in I binding, whereas replacement by acid-hydrolyzed albumin or with polyglutamic acid was either ineffective or even inhibitory. Lysine-modified or arginine-modified albumins caused a small enhancement (14-32%) and no enhancement of I uptake, resp. Dextran at low concns. (0.04-0.4 mg/mL) did not influence I uptake and at higher concns. (4-40 mg/mL) caused a decrease in uptake by both the endothelium and subendothelial layers. Low concns. of dextran sulfate inhibited I uptake to 20-30% of control values. These data express the importance of accompanying protein in the response of the vascular endothelium during binding of I. The possibility that other protein-cell interactions may be similarly influenced by macromol. solutes is also discussed.

L7 ANSWER 11 OF 12 MEDLINE on STN DUPLICATE 2
 85132777. PubMed ID: 3882846. Naturally occurring carbohydrate antibodies: interference in solid-phase immunoassays. Hamilton R G; Adkinson N F. Journal of immunological methods, (1985 Feb 28) Vol. 77, No. 1, pp. 95-108. Journal code: 1305440. ISSN: 0022-1759. Pub. country: Netherlands. Language: English.

AB Antibody assays utilizing carbohydrate matrices (agarose, cellulose) for protein insolubilization are subject to non-specific and specific interfering factors. This report examines factors which diminish the quality of particle-based solid-phase radioimmunoassays (SPRIAs) for antigen-specific human IgG. Interfering factors are divided into (a) constant non-specific binding which is similar with all human sera and appears related to simple adherence of IgG to agarose and cellulose, and (b) absorbable binding which varies considerably among sera in agarose and cellulose-based assays, and results from the presence of IgG antibody specific for the carbohydrate matrix. Constant non-specific binding is predictably 1-3% Bmax (maximum binding) in all human and rabbit sera. In contrast, the absorbable binding levels vary widely: 0.75-29% Bmax in 58% (study 1, n = 50) and 40% (study 2, n = 200) of normal individuals for agarose, and 3-30% Bmax in 70% of the population for microcrystalline cellulose. IgG anti-agarose antibodies were found in 13 of 16 rabbit sera examined. Ultracentrifugation and immune-complex studies demonstrated that aggregated or immune-complexed IgG does not contribute to the absorbable IgG binding. Inhibition with acid hydrolyzed soluble agarose and provided evidence for a specific IgG anti-agarose antibody that causes variable background binding. Pre-absorption of sera with agarose prior to analysis in the agarose-based SPRIA removed greater than 90% of anti-agarose antibodies and eliminated false positive results. These studies suggest rabbit and perhaps other heterologous antibodies prepared by protein-agarose affinity column chromatography may contain significant levels of naturally occurring antibodies against agarose or cellulose. These naturally occurring carbohydrate antibodies may interfere in solid-phase carbohydrate-based immunologic methods and immunoassays.

L7 ANSWER 12 OF 12 MEDLINE on STN
 73044543. PubMed ID: 4628867. An absorption method for preparing anti-M-typing streptococcal sera using acid-hydrolyzed cells. Beck A; Bergner-Rabinowitz S. The Journal of laboratory and clinical medicine, (1972 Dec) Vol. 80, No. 6, pp. 834-8. Journal code: 0375375. ISSN: 0022-2143. Pub. country: United States. Language: English.

=> s acid hydrolyzed immunglobulin
L8 0 ACID HYDROLYZED IMMUNGLOBULIN

=> s neutralized IgG fraction
L9 0 NEUTRALIZED IGG FRACTION

=> s IgG fraction
L10 6317 IGG FRACTION

=> s l10 and molecular weight
L11 442 L10 AND MOLECULAR WEIGHT

=> s l11 and 55000
L12 0 L11 AND 55000

=> s l11 and heat
L13 15 L11 AND HEAT

=> dup remove l13
PROCESSING COMPLETED FOR L13
L14 8 DUP REMOVE L13 (7 DUPLICATES REMOVED)

=> d l14 1-8 cbib abs

L14 ANSWER 1 OF 8 MEDLINE on STN
94303373. PubMed ID: 7518175. Immuno-gold electron microscopical detection of heat shock protein 60 (hsp60) in mitochondria of rat hepatocytes and myocardiocytes. Kreisel W; Hildebrandt H; Schiltz E; Kohler G; Spamer C; Dietz C; Mossner W; Heilmann C. (Medizinische Universitäts-Klinik, Abteilung Gastroenterologie und Hepatologie, Freiburg, Germany.) Acta histochemica, (1994 Mar) Vol. 96, No. 1, pp. 51-62. Journal code: 0370320. ISSN: 0065-1281. Pub. country: GERMANY: Germany, Federal Republic of. Language: English.

AB We characterize the specificity of a polyclonal antibody against heat shock protein 60 (hsp60) and present an application for ultrastructural localization studies of this protein. The antibody was obtained from an IgG fraction (AB 121) originally raised against the calcium binding protein calsequestrin by immunoabsorption on isolated rat liver hsp60. As shown by partial N-terminal amino acid sequence analysis of immunoprecipitated proteins AB 121 contained reactivities against hsp60, calsequestrin and the glycoprotein fetuin. In rat heart AB 121 recognized calsequestrin and hsp60. In human and rat liver the only reacting protein was hsp60. In rat erythrocytes the antibody bound to 61 kDa and 58 kDa isoforms of fetuin. According to published data no amino acid sequence homologies nor common motifs are found between calsequestrin, hsp60 and fetuin. As the first application the anti-hsp60 antibody was used for immuno-gold electron microscopical localization of hsp60: in myocardiocytes and hepatocytes of the rat strong labelling was obtained exclusively in mitochondria. No extramitochondrial structures were labelled. The specificity of the antibody and its ability to be visualized by immuno-gold electron microscopy offers the possibility to study the expression of this protein in the liver and in other organs. Possible clinical applications of these studies are discussed, since hsp60 could be a target antigen of autoantibodies in diseases such as autoimmune hepatitis, primary sclerosing cholangitis or primary biliary cirrhosis.

L14 ANSWER 2 OF 8 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
1992:607782 The Genuine Article (R) Number: JT017. SIMILARITY BETWEEN MYCOBACTERIAL AND HUMAN EPIDERMAL ANTIGENS. VANDENAKKER T H W (Reprint); NAAFS B; KOLK A H J; DEGLOPPERVANDERVEER E; CHIN R A M; LIEN A; VANJOOST T H. ACAD HOSP DIJKZIGT ROTTERDAM, DEPT DERMATO VENEREOL, DR MOLEWATERPLEIN 40, 3015 GD ROTTERDAM, NETHERLANDS; ACAD HOSP ROTTERDAM DIJKZIGT, DEPT IMMUNOL, 3015 GD ROTTERDAM, NETHERLANDS; ROYAL TROP INST, NH SWELLENGREBEL

LAB TROP HYG, AMSTERDAM, NETHERLANDS. BRITISH JOURNAL OF DERMATOLOGY (OCT 1992) Vol. 127, No. 4, pp. 352-358. ISSN: 0007-0963. Publisher: BLACKWELL SCIENCE LTD, OSNEY MEAD, OXFORD, OXON, ENGLAND OX2 0EL. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Eight out of 17 mouse anti-*Mycobacterium leprae* monoclonal antibodies (MAb) were previously observed to react with human nerve and skin antigenic determinants in cryostat sections, using an indirect immunoperoxidase technique. These observations suggested that antigenic mimicry may be involved in the development of the clinical manifestations of leprosy. In the present study we have extended our earlier findings by investigating sera from leprosy patients and MAb using Western blot technique. It was observed that 30 sera and their corresponding F(ab')₂ fragments from isolated IgG fractions of both tuberculoid and lepromatous patients reacted with 40-50 epidermal proteins of molecular weights (MW) ranging from 10 to 130 kDa. Sera from 14 controls, however, showed similar reactivity patterns. Absorption of nine patient and control sera with *M. tuberculosis*, *M. marinum* and *M. kansasii* resulted in the removal of several components of different MW in nine, four and three cases, respectively. No consistent differences between sera from leprosy patients and controls were observed. Four out of eight MAb against *M. leprae* which reacted with determinants in human epidermis and/or dermis in skin cryostat sections reacted with epidermal proteins of MW higher than 39 kDa in Western blot. Four MAb which showed reactivity in cryostat sections did not react in Western blot. Another four MAb did react with human epidermal proteins in Western blot but did not react in cryostat sections, indicating that the MAb were reacting with different epitopes in the two systems. Five MAb did not react with human epidermal proteins either in cryostat sections or in Western blot. Because all sera that were investigated contained antibodies against antigenic determinants of epidermal proteins, some of which are shared with *M. leprae* and cultivatable environmental mycobacteria, it is tempting to speculate that antigenic mimicry could be involved in autoimmune skin diseases which are induced and/or maintained by environmental micro-organisms.

L14 ANSWER 3 OF 8 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 1

1988:504875 Document No.: PREV198886125559; BA86:125559. CALMODULIN-LIKE CALCIUM-BINDING PROTEIN IDENTIFIED IN CALCIUM-RICH MINERAL DEPOSITS FROM FRESHWATER MUSSEL GILLS. SILVERMAN H [Reprint author]; SIBLEY L D; STEFFENS W L. DEP MED MICROBIOL, STANFORD UNIV SCH MED, STANFORD, CA 94305, USA. Journal of Experimental Zoology, (1988) Vol. 247, No. 3, pp. 224-231.

CODEN: JEZAOO. ISSN: 0022-104X. Language: ENGLISH.

AB Extracellular calcium concretions found in the gills of freshwater unionids are largely inorganic, containing calcium and phosphate. The organic fraction of the isolated concretions accounts for 25% of their dry weight as determined by ashing. The organic fraction of isolated concretions was examined using SDS-polyacrylamide electrophoresis. The concretion fraction is separated into 13-14 protein bands. These bands can be further differentiated into EDTA soluble proteins and insoluble core proteins. One of the soluble proteins has a molecular weight of approximately 17,000 daltons (Da) and comigrates with authentic vertebrate calmodulin. The 17,000-Da concretion protein cross-reacts with sheep IgG prepared against bovine brain calmodulin as shown by immunoblot. Rabbits and mice, challenged with the entire concretion organic fraction produce an IgG fraction which always recognizes an epitope of the 17,000-Da protein as the major antigenic determinant. This same protein is also a calcium binding protein as shown by ⁴⁵Ca autoradiography even after heat and SDS/mercaptoethanol treatment. To determine that this protein was not bound to the concretions as an artifact of the isolation procedures, immunocytochemical procedures were used to localize the antigenicity to 17,000-Da and vertebrate calmodulin in situ. Immunocytochemical localization indicates the protein is present on the concretions in situ

but documents that the majority of this protein is located in concretion-forming cells. Electron microscopic immunocytochemistry demonstrates that the protein is found largely in early concretion-forming cells in protein granules formed before concretion architecture is observed. This may imply that the protein is likely important in the initiation of concretion formation, and is only a residual protein as found on the extracellular concretions.

L14 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN

1988:498815 Document No. 109:98815 Method of producing virus- and blood group substance-free immunoglobulin preparations for intravenous injection. Uemura, Yahiro; Uriyu, Katsuhiko; Takechi, Kazuo; Hirao, Yutaka; Suyama, Tadakazu (Green Cross Corp., Japan). Eur. Pat. Appl. EP 246579 A2 19871125, 8 pp. DESIGNATED STATES: R: CH, DE, ES, FR, GB, LI. (English). CODEN: EPXXDW. APPLICATION: EP 1987-107112 19870516. PRIORITY: JP 1986-114421 19860519; JP 1986-234757 19860930; JP 1987-21481 19870131.

AB Ig preps. for i.v. injection, which are substantially free of anti-human blood group substance antibodies and contaminant viruses, are prepared. The preparation involves (1) treating an Ig-containing fraction with PEG with a mol. weight of 1000-10,000 at pH 4-6, ion strength 0.0001-0.1M, and 0-4°, and recovering the supernatant; (2) treating the supernatant with 10-15 weight/volume% PEG with a mol. wt. of 1000-10,000 at pH 6-9, ion strength 0.0001-0.1M, and 0-4°, and recovering the precipitate, and (3) heat-treating, in any desired step, the Ig in the presence of a stabilizer to inactivate contaminant viruses. Cohn's fractions II + III were treated with 0.001M NaCl at pH 5, PEG 4000 was added to concentration of 8%, and the material was centrifuged at 2°. The supernatant was adjusted to pH 8.0, PEG 4000 was added to a final concentration of 12%, the solution was centrifuged at 2°, and an IgG fraction was collected. The IgG fraction was dissolved in 0.6% aqueous NaCl at a concentration of 7% at pH 6.5, and the solution was passed through a column of Benzamidine-Sepharose and a column of human blood group substance-containing Formyl-Cellulofine to decrease human blood group antibodies from (1:32) to (1:2). To the unadsorbed fraction were added 1 weight/volume% human albumin and 2 weight/volume% saccharose per 5 weight/volume% IgG and the resultant mixture was sterilized by filtration, lyophilized, and heat-treated at 60° for 72 h. The preparation contained monomeric IgG alone; the human blood group antibody content was low and the anticomplement value was 10-15 CH50/mL.

L14 ANSWER 5 OF 8 MEDLINE on STN DUPLICATE 2

83233337. PubMed ID: 6602679. Reactivity of low molecular weight material in cellular immune complex assays. Cooper K M; Moore M. Clinical and experimental immunology, (1983 May) Vol. 52, No. 2, pp. 407-16. Journal code: 0057202. ISSN: 0009-9104. Pub. country: ENGLAND: United Kingdom. Language: English.

AB A major difference in molecular size of material reactive in the Clq binding assay and two cellular assays (Raji and L1210) for immune complexes, is reported. Elevated Clq binding of pathological sera was associated with material in the range 7-19S, as determined by Sepharose 6B chromatography of sera from patients with chronic inflammatory and neoplastic lung diseases. By contrast, reactivity of identical sera in the Raji and L1210 assays was linked predominantly with material of molecular size 7S. Dissociation of immune complexes on storage and/or in consequence of the chromatographic procedure was effectively discounted. Furthermore, differential binding of 7S IgG fractions tested at a standard concentration indicated that reactivity in either test was not attributable to non-specific binding of IgG. In a previous study, saturation of FcR (on L1210 and Raji) and C3R (on Raji only) by heat-aggregated IgG failed to distinguish whether binding directly involved these receptors or other cell surface components. In the present investigation, no firm correlations emerged between reactivity in the two

tests and possible candidate antibodies reactive with cell surface components such as anti-lymphocyte and anti-nuclear antibodies. It is therefore suggested that low molecular weight binding may be attributable to more than one factor including 7S IgG (immune complex dissociated, or otherwise), autoantibodies, IgG-C3 complexes and possibly very small immune complexes (Ag1, Ab1). The assumption that Raji and L1210 and possibly other cellular assays detect only high molecular weight immune complexes is questionable and the need for further characterization of other reactive material is emphasized.

L14 ANSWER 6 OF 8 MEDLINE on STN DUPLICATE 3
82021607. PubMed ID: 6269446. Lectin and toxin-like activities of *Entamoeba histolytica*: comparison of properties. Kobiler D; Mirelman D; Mattern C F. The American journal of tropical medicine and hygiene, (1981 Sep) Vol. 30, No. 5, pp. 955-9. Journal code: 0370507. ISSN: 0002-9637. Pub. country: United States. Language: English.

AB A comparison was made between properties of a recently discovered *Entamoeba histolytica* lectin which has a carbohydrate specificity for N-acetylglucosamine oligosaccharides and the previously found toxin-like principle of the ameba. A separation between these two activities was achieved upon subcellular fractionation by high speed centrifugation of freeze-thawed disrupted *E. histolytica* trophozoites (strain HM-1). Practically all of this lectin activity, as determined by hemagglutination of glutaraldehyde-fixed human erythrocytes, was found associated with the sedimented membrane fraction. This fraction did not affect monolayers of tissue-cultured mammalian cells. On the other hand, the soluble supernatant solution caused extensive damage to the tissue-cultured cells (change in morphology and detachment of cells). Both the lectin and toxin activities were heat-labile and their activities were preserved by the presence of reducing agents and proteolytic enzyme inhibitors. In contrast to the toxin, the isolated lectin was inactive at pH 7.2 and active only at pH 5.7-6.0. Both the lectin and toxin were inhibited by a number of macromolecular compounds such as chitin, peptidoglycan, bovine serum and an IgA fraction isolated from human colostrum. Only the lectin activity, however, was inhibited by low molecular weight chitin oligosaccharides (GlcNAc)_n=2-6 or by lysozyme-digested peptidoglycan subunits. Moreover, fetuin and a ganglioside mixture extracted from ox brain were found to inhibit only the toxin-like activity. The IgG fraction of sera from patients with invasive amebiasis neutralized both lectin and toxin-like activities, while IgG from normal sera failed to neutralize either activity. Although our results indicate that in *E. histolytica*, lectin and toxin are two separate activities, both of them share a considerable number of properties which does not exclude the possibility that they may be related.

L14 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2007 ACS on STN
1980:468348 Document No. 93:68348 Alkaline proteinase in delayed hypersensitivity reactions. Kamihara, Takeshi (Med. Sch., Kumamoto Univ., Kumamoto, Japan). Chudokuken Ho, 12, 17-20 (Japanese) 1979. CODEN: CHUHDR. ISSN: 0910-1764.

AB Alkaline proteinase was isolated from the skin of guinea pigs with delayed hypersensitivity reactions. Its activity was inhibited by SH-inhibitors. In fractionation with Sephadex G-100 column, the main alkaline proteinase was eluted in a fraction corresponding to IgG fraction. The mol. weight was >105. The enzyme activity was inhibited by p-chloromercuribenzoic acid, p-chloromercuriphenylsulfonic acid, Trasylol, and by heat at 56° for 30 min. S.c. injection of this fraction in guinea pigs induced polymorphonuclear leukocyte-macrophage reactions, indicating that alkaline proteinase is responsible for the delayed hypersensitivity reaction.

L14 ANSWER 8 OF 8 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN DUPLICATE 4

79090755 EMBASE Document No.: 1979090755. Trypanosoma brucei: Some properties of the cytotoxic reaction induced by normal human serum. Rifkin M.R.. Rockefeller Univ., New York, N.Y. 10021, United States. Experimental Parasitology Vol. 46; No. 2, pp. 189-206 1978.
CODEN: EXPAAA

Pub. Country: United States. Language: English.

AB The trypanocidal activity of normal human serum has been studied in vitro using Trypanosoma brucei as the test organism. The variables affecting the rate and extent of lysis, such as time, temperature, serum concentration, and pleomorphism of trypanosomes, are described. Trypanocidal titers of serum and serum fractions were quantitatively determined under standardized incubation conditions. Inactivation and/or removal of components of both the classical and alternate pathways of complement activation had no effect on the trypanocidal properties of human serum. The active factor was nondialyzable, present in plasma at equivalent levels to that in serum, and not removed by absorption with IgG fractions of antisera against human IgM or α 2-macroglobulin. The trypanocidal factor could be inactivated by heat (65° C), dithiothreitol, urea, and trypsin. Gel filtration studies indicated that the trypanocidal activity eluted as a single protein with a molecular weight of about 500,000.

=> s (yoder r?/au or strohbehn r?/au)
L15 442 (YODER R?/AU OR STROHBEHN R?/AU)

=> s l15 and IgG fraction
L16 0 L15 AND IGG FRACTION

=> s l15 and IgG
L17 33 L15 AND IGG

=> dup remove l17
PROCESSING COMPLETED FOR L17
L18 16 DUP REMOVE L17 (17 DUPLICATES REMOVED)

=> d l18 1-16 cbib abs

L18 ANSWER 1 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN 2006:280005 Document No.: PREV200600287009. Isolated bovine IgG heavy chain protein and its use as an antimicrobial. Yoder, Ralph D. [Inventor]; Strohbehn, Ronald E. [Inventor]. Ames, IA USA. ASSIGNEE: The Lauridsen Group Incorporated. Patent Info.: US 06939954 20050906. Official Gazette of the United States Patent and Trademark Office Patents, (SEP 6 2005)
CODEN: OGUPE7. ISSN: 0098-1133. Language: English.

AB A new protein derived from acid hydrolyzed IgG concentrate which has a molecular weight of about 55,000, and is activated by heat within the defined narrow temperature range provides resulting product that has a protective mechanism for bacterial and viral invasion of living cells.

L18 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN 2005:1294041 Document No. 144:21854 Immunoglobulin compositions for modulating the immune system of animals. Campbell, Joy M.; Strohbehn, Ronald E.; Weaver, Eric M.; Borg, Barton S.; Russell, Louis E.; Pozo, Francisco Javier Polo; Arthington, John D.; Quigley, James D. (USA). U.S. Pat. Appl. Publ. US 2005271674 A1 20051208, 23 pp., Cont.-in-part of U.S. Ser. No. 973,283, abandoned. (English). CODEN: USXXCO. APPLICATION: US 2004-470982 20040121. PRIORITY: US 2001-264987P 20010130; US 2001-284067P 20010416; US 2001-973283 20011009; WO 2002-US2752 20020129.

AB The applicant has disclosed that oral administration of Igs purified from animal blood can modulate serum IgG, TNF- α or other nonspecific immunity components' levels for treatment of immune

dysfunction disorders, potentiation of vaccination protocols, and improvement of overall health and weight gain in animals, including humans. In expts. with baby pigs oral doses of the Ig composition decreased the immune responses to rotavirus and PRRS vaccines, thereby allowing energy and nutrients to be redirected to other productive functions, such as growth. The above Ig composition delivered via water to turkeys under respiratory disease challenge increased feed efficiency and the animals' survival.

L18 ANSWER 3 OF 16 MEDLINE on STN DUPLICATE 1
2005176187. PubMed ID: 15630696. Involvement of GABAergic and cholinergic medial septal neurons in hippocampal theta rhythm. Yoder Ryan M; Pang Kevin C H. (Department of Psychology, J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, Ohio 43403, USA.) Hippocampus, (2005) Vol. 15, No. 3, pp. 381-92. Journal code: 9108167. ISSN: 1050-9631. Pub. country: United States. Language: English.

AB Hippocampal theta rhythm (HPCtheta) may be important for various phenomena, including attention and acquisition of sensory information. Two types of HPCtheta (types I and II) exist based on pharmacological, behavioral, and electrophysiological characteristics. Both types occur during locomotion, whereas only type II (atropine-sensitive) is present under urethane anesthesia. The circuit of HPCtheta synchronization includes the medial septum-diagonal band of Broca (MSDB), with cholinergic and gamma-aminobutyric acid (GABA)ergic neurons comprising the two main projections from MSDB to HPC. The primary aim of the present study was to assess the effects of GABAergic MSDB lesions on urethane- and locomotion-related HPCtheta, and compare these effects to those of cholinergic MSDB lesions. Saline, kainic acid (KA), or 192 IgG-saporin (SAP) was injected into MSDB before recording. KA preferentially destroys GABAergic MSDB neurons, whereas SAP selectively eliminates cholinergic MSDB neurons. A fixed recording electrode was placed in the dentate mid-molecular layer, and stimulating electrodes were placed in the posterior hypothalamus (PH), and medial perforant path (PP). Under urethane anesthesia, HPCtheta was induced by tail pinch, PH stimulation, and systemic physostigmine; none of the rats with KA or SAP showed HPCtheta in any of these conditions. During locomotion, HPCtheta was attenuated, but not eliminated, in rats with KA or SAP lesions. Intraseptal KA in combination with either intraseptal SAP or PP lesions reduced locomotion-related HPCtheta beyond that observed with each lesion alone, virtually eliminating HPCtheta. In contrast, intraseptal SAP combined with PP lesions did not reduce HPCtheta beyond the effect of each lesion alone. We conclude that both GABAergic and cholinergic MSDB neurons are necessary for HPCtheta under urethane, and that each of these septohippocampal projections contributes to HPCtheta during locomotion. Copyright (c) 2005 Wiley-Liss, Inc.

L18 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
2003:950454 Document No. 140:8813 Globulin protein to lower cholesterol in humans. Yoder, Ralph D.; Weaver, Eric Matthew (The Lauridsen Group Incorporated, USA). U.S. Pat. Appl. Publ. US 2003223985 A1 20031204, 16 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-157449 20020529.

AB A globulin protein composition is described. The globulin concentrate is internally administered to animals including humans through food or water, or through conventional pharmaceutical dosage forms. The composition is effective in lowering blood cholesterol and phospholipids. The oral administration of bovine IgG concentrate reduced total and LDL cholesterol in healthy, mildly hypocholesterolemic volunteers.

L18 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN
2003:794782 Methods and compositions of treatment for modulating the immune system of animals. Campbell, Joy M.; Strohschein, Ronald E.; Weaver, Eric M.; Borg, Barton S.; Russell, Louis E.; Polo, Pozo Francisco Javier; Arthington, John D.; Quigley, James D. (The Lauridsen

Group, USA). U.S. Pat. Appl. Publ. US 20030190314 A1 20031009, Cont.-in-part of Ser. No. US 2001-973283, filed on 9 Oct 2001 which which (English). CODEN: USXXCO. APPLICATION: US 2003-375844 20030225. PRIORITY: US 2001-PV264987 20010130; US 2001-PV284067 20010416; US 2001-973283 20011009.

AB Methods and compositions are disclosed for the dietary modulation of the immune system and gut microbial response in animals. Applicant has identified that oral administration of a supplemental spray dried plasma purified from animal serum can modulate serum IgG levels for treatment in such things as diminished immune capacity, intestinal microbial balance, autoimmune disorders, potentiation of vaccination protocols, and improvement of overall health and weight gain in animals, including humans.

L18 ANSWER 6 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN 2004:203701 Document No.: PREV200400204244. Medial septal and entorhinal cortical involvement in hippocampal theta rhythm. Yoder, R. M. [Reprint Author]; Pang, K. C. H.. Psychology, Bowling Green State Univ., Bowling Green, OH, USA. Society for Neuroscience Abstract Viewer and Itinerary Planner, (2003) Vol. 2003, pp. Abstract No. 719.19. <http://sfn.scholarone.com>. e-file. Meeting Info.: 33rd Annual Meeting of the Society of Neuroscience. New Orleans, LA, USA. November 08-12, 2003. Society of Neuroscience. Language: English.

AB Hippocampal theta rhythm (HPCtheta) may be involved in various phenomena, including attention and the acquisition of sensory information. Two projections to HPC, the medial septum-diagonal band of Broca (MSDB) and entorhinal cortex (EC), are involved in the activation or synchronization of HPCtheta. MSDB contains excitatory (cholinergic) and inhibitory (GABAergic) hippocampal projections via the fimbria/fornix. EC contains excitatory (glutamatergic) hippocampal projections via the perforant path (PP). MSDB GABAergic, MSDB cholinergic, or bilateral PP lesions eliminate HPCtheta during urethane anesthesia (HPCtheta-II). In unanesthetized recordings, each of these lesions reduced but did not eliminate HPCtheta during locomotion (HPCtheta-I); MSDB cholinergic and EC lesions caused similar reductions in HPCtheta, and MSDB GABAergic lesions produced a greater amplitude reduction. In an attempt to determine whether interactions exist between MSDB projections and EC, we examined the effects of MSDB GABAergic or cholinergic lesions combined with PP lesions on HPCtheta-I. MSDB GABAergic and cholinergic lesions were produced by intraseptal injection of kainic acid and 192 IgG-saporin, respectively. Bilateral PP lesions were produced by passing cathodal current through an electrode located in the medial PP. HPCtheta amplitude was calculated as the square root of power at peak frequency (Fourier analysis) within the HPCtheta range. The combination of MSDB GABAergic and PP lesions eliminated HPCtheta-I. The combination of MSDB cholinergic and PP lesions did not reduce HPCtheta-I amplitude further than MSDB cholinergic or PP lesions alone. These results suggest the inhibitory (MSDB GABAergic) and excitatory (MSDB cholinergic or EC glutamatergic) projections interact to support HPCtheta-I. Furthermore, MSDB cholinergic and EC glutamatergic projections may be redundant for HPCtheta-I.

L18 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN 2002:777764 Document No. 137:277802 Methods and compositions for treatment of immune dysfunction disorders. Campbell, Joy M.; Strohbehn, Ronald E.; Weaver, Eric M.; Borg, Barton S.; Russell, Louis E.; Polo Pozo, Francisco Javier; Arthington, John D.; Quigley, James D., III (The Lauridsen Group, Incorporated, USA). PCT Int. Appl. WO 2002078742 A2 20021010, 48 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML,

MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.
APPLICATION: WO 2002-US2753 20020129. PRIORITY: US 2001-264987P 20010130;
US 2001-973284 20010910.

AB Methods and compns. are disclosed for modulating the immune system of animals. Applicant has identified that oral administration of Ig or plasma fractions purified from animal serum can modulate serum IgG and/or TNF- α levels for treatment of autoimmune disorders, potentiation of vaccination protocols, and improvement of overall health and weight gain in animals, including humans. The source of globulins can be from animal serum, plasma, egg, or milk. Administration of the Ig lowers serum IgG and TNF- α levels, which allows the immune system to mount a more aggressive response upon challenge. Also, disease states associated with elevated IgG or TNF- α levels are improved. The examples discuss swine fed diets containing plasma fractions or globulins and their effect on weight gain and health of the animals following vaccination. Also discussed was the immunomodulatory effect of plasma fractions on monocyte and macrophage respiratory burst and phagocytosis.

L18 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

2002:777763 Document No. 137:293566 Oral administration of γ -globulin preparations for modulating the immune system of animals. Campbell, Joy M.; Strohhahn, Ronald E.; Weaver, Eric M.; Borg, Barton S.; Russell, Louis E.; Polo Pozo, Francisco Javier; Arthington, John D.; Quigley, James D., III (The Lauridsen Group, Incorporated, USA). PCT Int. Appl. WO 2002078741 A2 20021010, 58 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US2752 20020129. PRIORITY: US 2001-264987P 20010130; US 2001-284067P 20010416; US 2001-973283 20010910.

AB The authors disclose that oral administration of Igs purified from animal blood can modulate serum IgG, TNF- α or other non-specific immunity components. Administration of γ -globulin preps. were shown to potentiate vaccination of pigs and improve their health and weight gain.

L18 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2007 ACS on STN

2002:595056 Document No. 137:139367 Antimicrobial protein derived from bovine IgG. Yoder, Ralph D.; Strohhahn, Ronald E. (The Lauridsen Group Incorporated, USA). PCT Int. Appl. WO 2002061136 A2 20020808, 15 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US1403 20020115. PRIORITY: US 2001-772603 20010130; US 2001-941965 20010827.

AB A new protein derived from acid hydrolyzed IgG concentrate which has a mol. weight of about 55,000, and is activated by heat within the defined narrow temperature range provides resulting product that has a protective mechanism for bacterial and viral invasion of living cells.

L18 ANSWER 10 OF 16 MEDLINE on STN

DUPLICATE 2

2002046455. PubMed ID: 11751980. Toll-like receptor 2 is required for innate, but not acquired, host defense to *Borrelia burgdorferi*. Wooten R Mark; Ma Ying; Yoder R Alyson; Brown Jeanette P; Weis John H; Zachary James F; Kirschning Carsten J; Weis Janis J. (Department of Pathology, University of Utah, 50 North medical Drive, Salt Lake City, UT

84132, USA.) Journal of immunology (Baltimore, Md. : 1950), (2002 Jan 1) Vol. 168, No. 1, pp. 348-55. Journal code: 2985117R. ISSN: 0022-1767. Pub. country: United States. Language: English.

- AB *Borrelia burgdorferi* lipoproteins activate inflammatory cells through Toll-like receptor 2 (TLR2), suggesting that TLR2 could play a pivotal role in the host response to *B. burgdorferi*. TLR2 does play a critical role in host defense, as infected TLR2(-/-) mice harbored up to 100-fold more spirochetes in tissues than did TLR2(+/+) littermates. Spirochetes persisted at extremely elevated levels in TLR2-deficient mice for at least 8 wk following infection. Infected TLR2(-/-) mice developed normal *Borrelia*-specific Ab responses, as measured by quantity of *Borrelia*-specific Ig isotypes, the kinetics of class switching to IgG, and the complexity of the Ags recognized. These findings indicate that the failure to control spirochete levels in tissues is not due to an impaired acquired immune response. While macrophages from TLR2(-/-) mice were not responsive to lipoproteins, they did respond to nonlipoprotein components of sonicated spirochetes. These TLR2-independent responses could play a role during the inflammatory response to *B. burgdorferi*, as infected TLR2(-/-) mice developed greater ankle swelling than wild-type littermates. Thus, while TLR2-dependent signaling pathways play a major role in the innate host defense to *B. burgdorferi*, both inflammatory responses and the development of the acquired humoral response can occur in the absence of TLR2.

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2003:294689 Document No.: PREV200300294689. SPATIAL STRATEGIES IN RATS WITH CHOLINERGIC OR GABAergic LESIONS OF THE MEDIAL SEPTUM. Wright, K. M. [Reprint Author]; Yoder, R. M. [Reprint Author]; Pang, K. C. H. [Reprint Author]. Psychology, JP Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH, USA. Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002) Vol. 2002, pp. Abstract No. 378.2. <http://sfn.scholarone.com>. cd-rom. Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience. Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience. Language: English.

- AB The major projection neurons of the septohippocampal (SH) system are GABAergic and cholinergic. When both populations of neurons are damaged together, deficits in learning and memory occur. However, when only one population is damaged, spatial memory in the water maze and radial arm maze is intact. The present study evaluated whether spatial strategies differed between rats with either GABAergic or cholinergic septal lesions. Domoic acid or 192 IgG saporin (sap) was injected into the medial septum (MS) to damage GABAergic or cholinergic neurons, respectively. Spatial strategies were examined on the plus maze and water maze. In the plus maze, rats were started from a single arm and trained to enter a goal arm containing both the reward and an intra-maze cue. Probe trials assessed whether the rats used place, response or cue strategies. During a probe trial, the starting location and the intra-maze cue were moved from that during training. In the water maze, animals were trained for 9 days in 3-day cycles. The first two days of the cycle used a visible platform and the third day of training was performed with a submerged platform. A single probe trial was conducted on day 10. On the probe trial, the first quadrant visited determined whether rats were using cue, place, or response strategies. Preliminary results show that rats treated with domoic acid use the place strategy on all probe trials in the plus maze, but do not use a consistent strategy in the water maze. Sap-treated animals also use mainly a place strategy. The results of this study may help determine the role of MS neurons in spatial strategy selection.

L18 ANSWER 12 OF 16 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

2003:294687 Document No.: PREV200300294687. EFFECTS OF GABAergic OR CHOLINERGIC MEDIAL SEPTAL LESIONS ON ANXIETY. Yoder, R. M.

[Reprint Author]; Pang, K. C. H. [Reprint Author]. Psychology Dept, J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Bowling Green, OH, USA. Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002) Vol. 2002, pp. Abstract No. 378.1. <http://sfn.scholarone.com.cd-rom>. Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience. Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience. Language: English.

- AB The hippocampus (HPC) is a structure important for spatial learning and memory. GABAergic and cholinergic neurons in the medial septal area (MSA) provide the two major projections to HPC. Complete destruction of HPC or MSA impairs spatial memory. MSA lesions have an anxiolytic effect, and rats with MSA damage appear to be more exploratory. Spatial learning and memory may therefore be influenced by anxiety information reaching HPC through MSA. The present study assessed the effects of MSA GABAergic or cholinergic lesions on anxiety in the elevated plus maze and open-field task. Control rats received intraseptal saline; GABAergic lesions were induced by intraseptal domoic acid; cholinergic lesions were induced by intraseptal 192 IgG-saporin. An elevated plus maze was constructed with 2 open arms and 2 closed arms. Following habituation, each rat was placed in the center of the maze, then observed for 5 minutes. Time spent in the open vs. closed arms and number of entries into open vs. closed arms were compared between groups. The open-field task utilized a square arena with center and outer sections delineated on the floor. Following habituation, each rat was placed into the outer section, then observed for 5 minutes, during which the number of line crossings and amount of time spent in center vs. outer sections were calculated for comparison between groups. In both tasks, frequency of freezing, rearing, head dips, stretched-attend posture, grooming, and defecation was also compared between groups. Results of the present study may help elucidate the role of MSA in the effects of anxiety on learning and memory.

L18 ANSWER 13 OF 16 MEDLINE on STN DUPLICATE 3
2001527607. PubMed ID: 11573786. Formulation of colostrum supplements, colostrum replacers and acquisition of passive immunity in neonatal calves. Quigley J D; Strohbehn R E; Kost C J; O'Brien M M. (APC Company, Inc., Ames, IA 50010, USA.. jim.quigley@amerprotcorp.com) . Journal of dairy science, (2001 Sep) Vol. 84, No. 9, pp. 2059-65. Journal code: 2985126R. ISSN: 0022-0302. Pub. country: United States. Language: English.

- AB Provision of an adequate mass of IgG from maternal colostrum is essential to health and survival of neonatal calves. Colostrum supplements (CS) have been developed to provide supplemental immunoglobulin when maternal colostrum is of poor quality. However, colostrum replacers (CR) that provide ≥ 100 g of IgG have not been formulated. Our objective was to determine the absorption of IgG in newborn calves fed CS derived from bovine serum or CR derived from bovine immunoglobulin concentrate. The CS were prepared by collecting, processing, and spray drying bovine serum and blending with other ingredients to provide 45 to 50 g of IgG per dose. The CR were prepared by further processing bovine serum to increase IgG concentration to $> 50\%$ IgG and blending with other ingredients to provide 100 to 122 g of IgG per dose. Holstein calves ($n = 160$) were fed 90 to 244 g of IgG from CS or CR in 1 or 2 feedings in two experiments. Blood was collected from each calf by jugular venipuncture at 0 and 24 h of age and plasma IgG was determined by turbidimetric immunoassay. Apparent efficiency of IgG absorption was calculated. Plasma IgG concentrations at 24 h of age were indicative of IgG intake and averaged 5.5 to 14.1 g/L in calves fed CS and CR. Mean apparent efficiency of IgG absorption in calves fed CS was 25 and 28% in experiments 1 and 2, respectively. Mean apparent efficiency of IgG absorption in calves fed CR ranged from 19 to 32% and were affected by method of processing and number of times fed. Treatment of

plasma with polyethylene glycol reduced the efficiency of IgG absorption in experiment 1. The addition of animal fat to CR had no effect on IgG absorption. A second feeding of CR increased plasma IgG, but efficiency of absorption was reduced. Mean body weights at 60 d of age were not affected by treatment and ranged from 64.3 to 78.2 kg. Plasma IgG concentration in calves fed > or = 122 g of IgG from Ig concentrate approached (9.9 g/L) or exceeded 10 g/L, indicating successful transfer of passive immunity. Provision of IgG to prevent failure of passive transfer is possible with CR containing >20% IgG when fed at 454 g per dose.

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2001:520307 Document No.: PREV200100520307. Maze strategy in rats with GABAergic or cholinergic lesions of medial septum. Yoder, R. M. [Reprint author]; Reuss, S. A. [Reprint author]; Pang, K. C. H. [Reprint author]. Psychol Dept, Bowling Green State University, Bowling Green, OH, USA. Society for Neuroscience Abstracts, (2001) Vol. 27, No. 1, pp. 1111. print.

Meeting Info.: 31st Annual Meeting of the Society for Neuroscience. San Diego, California, USA. November 10-15, 2001. ISSN: 0190-5295. Language: English.

AB Cholinergic and GABAergic neurons are the two major cell types that project from medial septum to hippocampus. Although complete lesions of hippocampus or medial septum impair spatial memory, selective lesions of cholinergic or GABAergic neurons do not impair spatial abilities on an 8-arm radial or Morris water maze. Control and lesion rats possibly use different strategies to solve these tasks. Previous studies show that normal rats initially use a place strategy, then switch to a response strategy. In contrast, rats with hippocampus inactivated rely on a response strategy. Our preliminary results suggest that rats with GABAergic lesions of medial septum preferentially use a response strategy. The present study assessed whether rats with cholinergic (192-IgG saporin) or GABAergic (kainic acid) lesions of the medial septum preferentially use a place, response, or cue strategy to solve a plus maze task. During training, one arm contained food (goal) and an adjacent arm served as the starting location. The room contained distal cues and a proximal cue near the food. Probe trials were used every 4th day to assess the maze strategy used by the rat. During probe trials, the start location was located on the arm opposite the original start arm, and the proximal cue was located in the original start location. This study determines whether rats with loss of cholinergic or GABAergic medial septal neurons preferentially use different strategies to solve maze tasks.

L18 ANSWER 15 OF 16 MEDLINE on STN DUPLICATE 4

2002084244. PubMed ID: 11811676. GABAergic septohippocampal neurons are not necessary for spatial memory. Pang K C; Nocera R; Secor A J; Yoder R M. (Department of Psychology, J.P. Scott Center for Neuroscience, Mind and Behavior, Bowling Green State University, Ohio 43403, USA.. kpang@bgsu.edu). Hippocampus, (2001) Vol. 11, No. 6, pp. 814-27. Journal code: 9108167. ISSN: 1050-9631. Pub. country: United States. Language: English.

AB The medial septum/vertical limb of the diagonal band of Broca (MSDB) provides a major input to the hippocampus and is important for spatial memory. Both cholinergic and GABAergic MSDB neurons project to the hippocampus, and nonselective lesions of the MSDB or transections of the septohippocampal pathway impair spatial memory. However, selective lesions of cholinergic MSDB neurons using 192-IgG saporin (SAP) do not impair or only mildly impair spatial memory. Previously, intraseptal kainic acid was found to reduce levels of glutamic acid decarboxylase, a marker of GABAergic neurons, but not to alter the levels of choline acetyltransferase, a marker of cholinergic neurons. The present study further characterized the effects of kainic acid on GABAergic MSDB neurons and examined the effects of intraseptal kainic acid

on spatial memory. Saline, kainic acid, SAP, or the combination of kainic acid and SAP was administered into the MSDB of rats. Spatial memory was assessed in an eight-arm radial maze and a water maze. Kainic acid destroyed GABAergic septohippocampal neurons, but spared cholinergic neurons. SAP eliminated MSDB cholinergic neurons, sparing noncholinergic neurons. Coadministration of kainic acid and SAP destroyed GABAergic and cholinergic MSDB neurons. Acquisition of the radial maze task and performance on this task with 4-h delays were unimpaired by intraseptal kainic acid or SAP, but were impaired by coadministration of kainic acid and SAP. Acquisition of the water maze task was unaffected by intraseptal kainic acid, delayed slightly by SAP, and impaired severely by coadministration of kainic acid and SAP. These results provide evidence that kainic acid at appropriate concentrations effectively destroys GABAergic septohippocampal neurons, while sparing cholinergic MSDB neurons. Furthermore, lesions of the GABAergic septohippocampal neurons do not impair spatial memory. While lesions of cholinergic MSDB neurons may mildly impair spatial memory, the combined lesion of GABAergic and cholinergic septohippocampal neurons resulted in a memory impairment that was greater than that observed after a selective lesion to either population. Thus, damage of GABAergic or cholinergic MSDB neurons, which together comprise the majority of the septohippocampal pathway, cannot totally account for the spatial memory impairment that is observed after nonselective lesions of the MSDB.

L18 ANSWER 16 OF 16 MEDLINE on STN DUPLICATE 5
 1998027971. PubMed ID: 9361878. Development of an automated turbidimetric immunoassay for quantification of bovine serum immunoglobulin G. Etzel L R; Strohbehn R E; McVicker J K. (AMPC Inc, Ames, IA 50010, USA.) American journal of veterinary research, (1997 Nov) Vol. 58, No. 11, pp. 1201-5. Journal code: 0375011. ISSN: 0002-9645. Pub. country: United States. Language: English.

AB OBJECTIVE: To develop an automated turbidimetric immunoassay (TIA) for measurement of bovine IgG. SAMPLE POPULATION: 24 bovine serum samples. PROCEDURE: IgG concentration was determined by use of the TIA, and results were compared with those of the radial immunodiffusion (RID) method. Variables were determined, using commercially available reagents and a clinical biochemical analyzer. For the TIA, polyclonal goat anti-bovine IgG (Fc specific) serum, bovine IgG calibrator serum, and polyethylene glycol reaction buffer were used. Sample concentrations were determined by the instrument, using the linear regression method of least squares. The accuracy of this assay was validated by referencing to a purified bovine IgG standard and by recovery of control standards. Parallelism was documented by assay linearity and serial sample dilution linearity. Interference resulting from hemolyzed samples was examined. RESULTS: The TIA method correlated positively ($r = 0.9957$) and significantly ($P < 0.05$) with the RID method, yielding a regression equation with slope of 0.78708 and y-intercept of 1.02102. Bias attributable to hemolysis was not observed. CONCLUSIONS: The TIA method is automated, accurate, and precise for bovine serum IgG quantification. CLINICAL RELEVANCE: This assay provides sample results in approximately 10 minutes and may be used as an alternative to the manual RID method.

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